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Date: March 23, 2009	From: Harry B. Shubin MILLEN, WHITE, ZELANO & BRANIGAN, P.C. Arlington Courthouse Plaza I 2200 Clarendon Blvd., Suite 1400 Arlington, VA 22201 (U.S.A.) (Fax: 703-243-6410)
To: Examiner In Suk C. Bullock U.S. Patent and Trademark Office	Writer's Direct Dial: 703-812-5306
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Re: U.S. Patent Application No.: 10/519,355 Your Ref. F0510R-4941/00/FB Our Ref PET-2170	
Total No. of Pages: 4; if you do not receive all pages, please call (703) 243-6333	

Dear Examiner Bullock:

As requested, attached is a copy of the Declaration under 37 C.F.R. 1.132.

Sincerely,

Glimka Snodder
for Harry B. Shubin

HBS/tls

Information contained in this facsimile may contain privileged and confidential information and is intended solely for the use of the addressee listed above. If you are neither the intended recipient nor the employee or agent responsible for delivering this communication to the intended recipient, you are hereby notified that any disclosure, copying or distribution of, or the taking of any action in reliance on the contents of this communication is strictly prohibited. If you have received this communication in error, please immediately notify us by telephone on (703) 243-6333 to arrange for return of the original document to us at our cost. Thank you.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Hillion et al.

Examiner: Bullock, In Suk C

Serial No. 10/519,355

Group Art Unit: 1797

Filed: December 19, 2005

For : PROCESS FOR THE SELECTIVE HYDROGENATION OF POLYUNSATURATED COMPOUNDS TO MONOUNSATURATED COMPOUNDS USING A HOMOGENEOUS CATALYST.

DECLARATION UNDER 37 C.F.R. §1.132

Assistant Commissioner for Patents

Washington, D.C. 20231

Sir :

I, Slavik KASZTELAN, being duly warned, declare and say as follows:

THAT, I am a French citizen holding the titles of Engineer delivered by "Ecole des Hautes Etudes Industrielles de Lille" in 1982, of "Docteur ès Sciences" delivered by "Université de Lille" in 1984, residing at 69006 Lyon, France, 97 quai Charles de Gaulle.

THAT, I have been engaged on research by "Institut Français du Pétrole" in their Kinetics and Catalysis Department since 1988, where I have been continuously and actively in charge of researches in the fields of hydrocracking, hydroisomerization, dewaxing and hydrogenation of aromatic compounds. I was since September 2002 to April 2006 the manager of the Division "Catalysis and Separation". I am since May 1st, 2006, the Assistant Manager of the whole Refining and Petrochemical Division.

I declare further :

THAT, I am familiar with the contents of U.S. Patent Application Serial No 10/519,355.

THAT in order to support patentability of the present application, I have reviewed in details the cited prior art US-3,917,737.

I confirm that the catalytic hydrogenation process described in this document is provided with heterogeneous catalysts. These catalysts comprise a complex of iron, nickel or cobalt (compound A), an organometallic reducing agent (compound B) and an acidic, solid, silica-based and inorganic oxide support (compound C), and optionally, an electron donor ligand of a group V-A element compound D) (see col.1 lines 7-15).

It is clearly specified that the catalysts are in solid phase and useful in both fixed bed and slurry forms (see col.2 lines 7-8).

It is specified in col.7 lines 40-41 that "these catalysts are useful both in dry form or in a liquid solvent phase". The presence of this liquid solvent phase results from the method of preparation of the catalyst that is described col.7 lines 26-41. One skilled in the art understands that the presence of a solvent does not mean that the process uses a homogeneous catalyst.

The examples V and VIII of the cited reference disclose the hydrogenation of 1,3-pentadiene. According to Example V, the catalyst is in the form of extrudate pellets (heterogeneous catalyst). Example VIII corresponds to a comparative example, since the catalyst that is used does not contain any ligand and is not supported. The tests made with 1,3-pentadiene show that the hydrogenation leads to 90 mole% n-pentane and 10 mole% pentene. The conclusion of Example VIII (see col 14 lines 14-20) show clearly that "the supported catalyst on extrudate pellets is much more active for hydrogenation than the unsupported catalyst"

I declare further:

THAT, it is not obvious for a person of ordinary skill in petroleum refinery engineering (i.e. someone having at least a bachelor degree in chemical or petroleum refinery engineering and a least 5 years of experience) to deduce the process according to the present invention from reading the US-3,917,737 Patent. The hydrogenation process that is claimed uses a liquid catalytic composition which allows selective hydrogenation of polyunsaturated compounds to monounsaturated compounds. Thus, the hydrogenation of 1,3-butadiene leads to butenes, principally to cis 2- butene, and the catalyst has low activity for consecutive hydrogenation of 1-butene or 2-butene to butane.

It can not be deduced from the cited reference using a heterogeneous catalyst that the homogeneous catalyst according to the present invention will allow high selective hydrogenation of 1,3-butadiene.

The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information or belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 Title 18 of United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Solaize, February 27, 2009.



Slavik KASZTELAN